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1. Safety Precautions and Warnings

To prevent personal injury or damage to vehicles and/or the scan tool, read this instruction manual first and observe the following safety precautions at a minimum whenever working on a vehicle:

- Always perform automotive testing in a safe environment.
- Wear safety eye protection that meets ANSI standards.
- Keep clothing, hair, hands, tools, test equipment, etc. away from all moving or hot engine parts.
- Operate the vehicle in a well ventilated work area: Exhaust gases are poisonous.
- Put blocks in front of the drive wheels and never leave the vehicle unattended while running tests.
- Use extreme caution when working around the ignition coil, distributor cap, ignition wires and spark plugs. These components create hazardous voltages when the engine is running.
- Put the transmission in PARK (for automatic transmission) or NEUTRAL (for manual transmission) and make sure the parking brake is engaged.
- Keep a fire extinguisher suitable for gasoline/chemical/electrical fires nearby.
- Don’t connect or disconnect any test equipment while the ignition is on or the engine is running.
- Keep the scan tool dry, clean, free from oil/water or grease. Use a mild detergent on a clean cloth to clean the outside of the scan tool, when necessary.

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2. General Information

2.1 On-Board Diagnostics

The first generation of On-Board Diagnostics (called OBD I) was developed by the California Air Resources Board (CARB) and implemented in 1988 to monitor some of the emission control components on vehicles. As technology evolved and the desire to improve the On-Board Diagnostic system increased, a new generation of On-Board Diagnostic system was developed. This second generation of On-Board Diagnostic regulations is called "OBD II".

The European version of OBDII is commonly referred to as EOBD and has protocols developed for the European vehicle market.

The OBD II system is designed to monitor emission control systems and key engine components by performing either continuous or periodic tests of specific components and vehicle conditions. When a problem is detected, the OBD II system turns on a warning lamp (MIL) on the vehicle instrument panel to alert the driver typically by the phrase of “Check Engine” or “Service Engine Soon”. The system will also store important information about the detected malfunction so that a technician can accurately find and fix the problem. Here below follow three pieces of such valuable information:

1) **Whether the Malfunction Indicator Light (MIL) is commanded 'on' or 'off';**
2) **Which, if any, Diagnostic Trouble Codes (DTC’s) are stored;**
3) **Readiness Monitor status.**

2.2 Diagnostic Trouble Codes (DTC’s)

EOBD/OBD II Diagnostic Trouble Codes are codes that are stored by the on-board computer diagnostic system in response to a problem found in the vehicle. These codes identify a particular problem area and are intended to provide you with a guide as to where a fault might be occurring within a vehicle. OBD II/EOBD Diagnostic Trouble Codes consist of a five-digit alphanumeric code. The first character, a letter, identifies which control system sets the code. The other four characters, all numbers, provide additional information on where the

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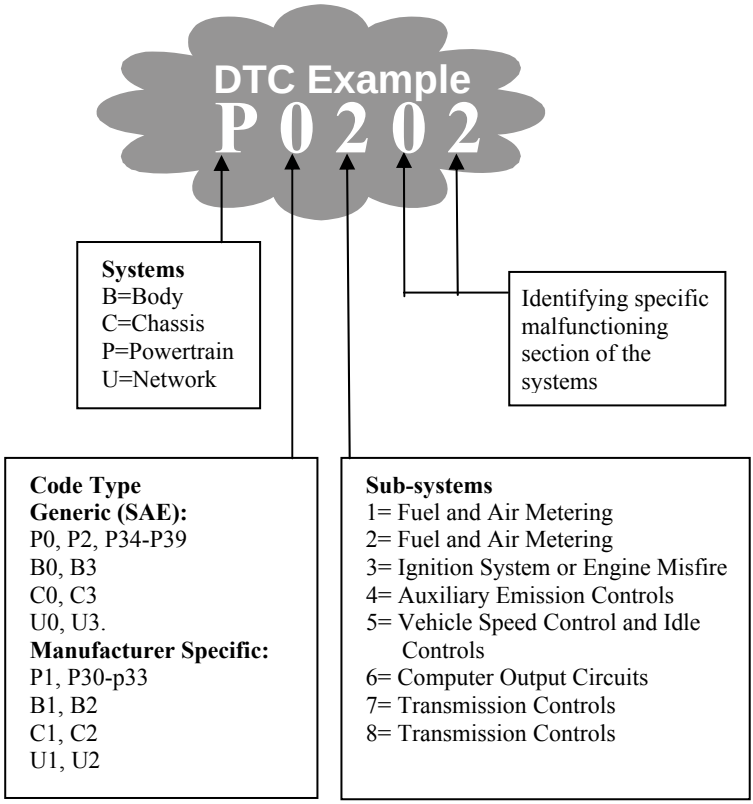
DTC originated and the operating conditions that caused it to set. Here below is an example to illustrate the structure of the digits:



2.3 Location of the Data Link Connector (DLC)

The DLC (Data Link Connector or Diagnostic Link Connector) is the standardized 16-cavity connector where diagnostic scan tools interface with the vehicle's on-board computer. The DLC is usually located 12 inches from the center of the instrument panel (dash), under or around the driver's side for most vehicles. If Data Link Connector is not located under dashboard, a label should be there telling location. For some Asian and European vehicles, the DLC is located behind the ashtray and the ashtray must be removed to access the connector. If the

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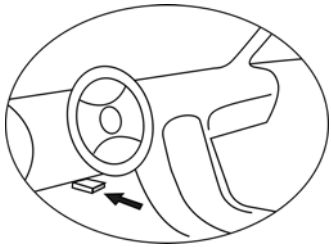
DLC cannot be found, refer to the vehicle's service manual for the location.



2.4 OBD II/EOBD Readiness Monitors

An important part of a vehicle's OBDII/EOBD system is the Readiness Monitors, which are indicators used to find out if all of the emissions components have been evaluated by the OBDII/EOBD system. They are running periodic tests on specific systems and components to ensure that they are performing within allowable limits.

Currently, there are eleven OBD II/EOBD Readiness Monitors (or I/M Monitors) defined by the U.S. Environmental Protection Agency (EPA). Not all monitors are supported by all vehicles and the exact number of monitors in any vehicle depends on the motor vehicle manufacturer's emissions control strategy.

Continuous Monitors -- Some of the vehicle components or systems are continuously tested by the vehicle's OBD II system, while others are tested only under specific vehicle operating conditions. The continuously monitored components listed below are always ready:

1）Misfire

2）Fuel System

3）Comprehensive Components (CCM)

Once the vehicle is running, the OBD II/EOBD system is continuously checking the above components, monitoring key engine sensors, watching for engine misfire, and monitoring fuel demands.

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Non-Continuous Monitors -- Unlike the continuous monitors, many emissions and engine system components require the vehicle to be operated under specific conditions before the monitor is ready. These monitors are termed non-continuous monitors and are listed below:

1) **EGR System**
2) **O2 Sensors**
3) **Catalyst**
4) **Evaporative System**
5) **O2 Sensor Heater**
6) **Secondary air**
7) **Heated Catalyst**
8) **A/C system**

2.5 OBDII/EOBD Monitor Readiness Status

OBD II systems must indicate whether or not the vehicle's PCM's monitor system has completed testing on each component. Components that have been tested will be reported as "Ready", or "Complete", meaning they have been tested by the OBD II system. The purpose of recording readiness status is to allow inspectors to determine if the vehicle's OBD II system has tested all the components and/or systems.

The powertrain control module (PCM) sets a monitor to "Ready" or "Complete" after an appropriate drive cycle has been performed. The drive cycle that enables a monitor and sets readiness codes to "Ready" varies for each individual monitor. Once a monitor is set as "Ready" or "Complete", it will remain in this state. A number of factors, including erasing of diagnostic trouble codes (DTC's) with a scan tool or a disconnected battery, can result in Readiness Monitors being set to "Not Ready". Since the three continuous monitors are constantly evaluating, they will be reported as "Ready" all of the time. If testing of a particular supported non-continuous monitor has not been completed, the monitor status will be reported as "Not Complete" or "Not Ready."

In order for the OBD monitor system to become ready, the vehicle should be driven under a variety of normal operating conditions. These operating conditions may include a mix of highway driving and stop

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and go, city type driving, and at least one overnight-off period. For specific information on getting your vehicle's OBD monitor system ready, please consult your vehicle owner's manual.

2.6 OBD II/EOBD Definitions

Powertrain Control Module (PCM) -- EOBD terminology for the on-board computer that controls engine and drives train.

Malfunction Indicator Light (MIL) -- Malfunction Indicator Light (Service Engine Soon, Check Engine) is a term used for the light on the instrument panel. It is to alert the driver and/or the repair technician that there is a problem with one or more of vehicle's systems and may cause emissions to exceed federal standards. If the MIL illuminates with a steady light, it indicates that a problem has been detected and the vehicle should be serviced as soon as possible. Under certain conditions, the dashboard light will blink or flash. This indicates a severe problem and flashing is intended to discourage vehicle operation. The vehicle onboard diagnostic system can not turn the MIL off until necessary repairs are completed or the condition no longer exists.

DTC -- Diagnostic Trouble Codes (DTC) that identify which section of the emission control system has malfunctioned.

Enabling Criteria -- Also termed Enabling Conditions. They are the vehicle-specific events or conditions that must occur within the engine before the various monitors will set, or run. Some monitors require the vehicle to follow a prescribed "drive cycle" routine as part of the enabling criteria. Drive cycles vary among vehicles and for each monitor in any particular vehicle.

EOBD Drive Cycle -- A specific mode of vehicle operation that provides conditions required to set all the readiness monitors applicable to the vehicle to the "ready" condition. The purpose of completing an EOBD drive cycle is to force the vehicle to run its onboard diagnostics. Some form of a drive cycle needs to be performed after DTC's have been erased from the PCM's memory or after the battery has been disconnected. Running through a vehicle's complete drive cycle will "set" the readiness monitors so that future faults can be detected. Drive cycles vary depending on the vehicle and the monitor

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that needs to be reset. For vehicle specific drive cycle, consult the vehicle's Owner's Manual.

Freeze Frame Data -- When an emission-related fault occurs, the EOBD system not only sets a code but also records a snapshot of the vehicle operating parameters to help in identifying the problem. This set of values is referred to as Freeze Frame Data and may include important engine parameters such as engine RPM, vehicle speed, air flow, engine load, fuel pressure, fuel trim value, engine coolant temperature, ignition timing advance, or closed loop status.

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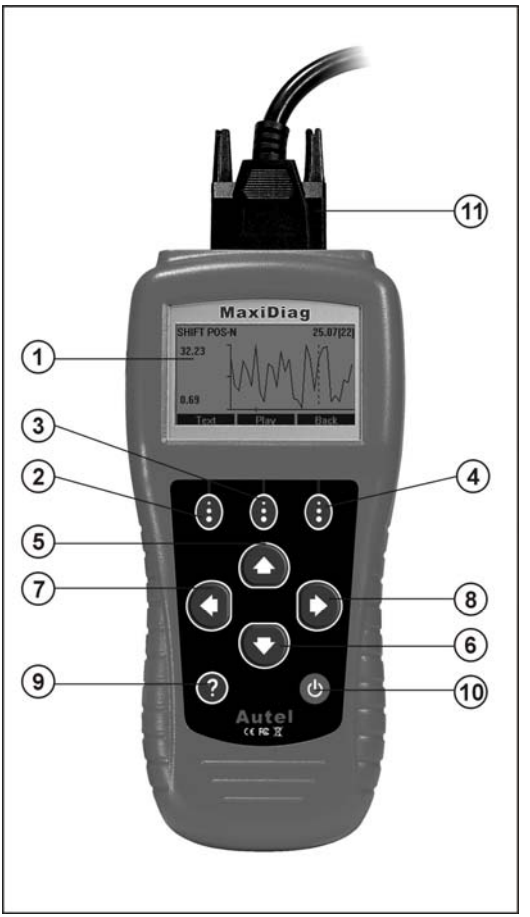
3. Using the Scan tool

3.1 Tool Description



① **LCD DISPLAY** -- Indicates test results. Backlit, 128 x 64 pixel display with contrast adjustment.

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②③④are three function keys that correspond with “buttons” on screens for executing commands.

② **FUNCTION BUTTON** -- Confirms a selection or an action from a menu, and enters next menu; It is also used to shift between text and graphic viewing of live data when viewing and playing back live data.

③ **FUNCTIONAL BUTTON** -- Saves retrieved data; Selects/deselects an item when viewing or recording live data; and plays/stops playing back live data.

④ **FUNCTIONAL BUTTON** -- Cancels a selection (or action) from a menu, and returns to previous menu.

⑤ **UP SCROLL BUTTON** -- Moves up through menu and submenu items in menu mode. When a DTC definition covers more than one screen, moves up through the current screen to previous screens for additional data. When looking up DTC, it is used to change value of selected character.

⑥ **DOWN SCROLL BUTTON** -- Moves down through menu and submenu items in menu mode. When a DTC definition covers more than one screen, moves up through the current screen to previous screens for additional data. When looking up DTC, it is used to change value of selected character.

⑦ **LEFT SCROLL BUTTON** -- Moves to previous screen, or to previous character when looking up DTC’s. It is also used to view previous trouble code when viewing DTC’s.

⑧ **RIGHT SCROLL BUTTON** -- Moves to next screen, or to next character when looking up DTC’s. It is also used to view next trouble code when viewing DTC’s.

⑨ **HELP BUTTON** -- Provides help information when pressed.

⑩ **POWER SWITCH** -- Turns on/off the scan tool when powered by AAA battery, and resets the tool when powered via vehicle battery.

⑪ **EXTENSION CABLE** -- Connects the scan tool to the vehicle’s Data Link Connector (DLC) via diagnostic connectors.

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3.2 Specifications

1) Display: Backlit, 128 x 64 pixel display with contrast adjustment.
2) Operating Temperature: 0 to 60°C (32 to 140 F°).
3) Storage Temperature: -20 to 70°C (-4 to 158 F°).
4) External Power: 6.0 to 21.0 V power provided via vehicle battery.
5) Internal Power: 6V power provided by four 1.5V batteries.
6) Dimensions:

Length	Width	Height
210 mm (8.27”)	99 mm (3.90”)	38 mm (1.50”)

7) NW: 1.0 kg (2.2lb), GW: 1.2 kg (2.65lb).

3.3 Accessories

1) **User’s Manual** -- Instructions on tool operations.
2) **CD** -- Includes user’s manual, update application and etc.
3) **Extension cable** -- Connects the scan tool to diagnostic connector.
4) **Diagnostic Connector** -- Provides power to the scan tool and communicates between the tool and vehicle.
5) **USB cable** -- Used to upgrade the scan tool, and to upload retrieved data.
6) **Carry case** -- A nylon case to store the scan tool when not in use.
7) **Four 1.5V batteries** -- Supplies power to the scan tool when disconnected from vehicle DLC.

3.4 Navigation Characters

Characters used to help navigate the scan tool are:

1) **“►”** -- Indicates current selection.
2) **“$”** -- Identifies the control module number from which the data is retrieved.
3) **“Graph”** -- Indicates graphic information is available.
4) **“▭”** -- Indicates battery volume when powered by batteries.

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5) " " -- Scroll bar indicates additional information is available on previous or next screens.

3.5 Power

Internal Battery Power

The scan tool has four 1.5V batteries that provide power for off-car review and analysis. Press power key to turn on the scan tool. When the "" icon flashes, replace the battery as instructed in "Battery Replacement" on paragraph 3.9.

- ***If the scan tool is stored for a long period of time, remove batteries to prevent battery leakage from damaging battery compartment.***

External Power

External power of the scan tool is provided via the vehicle Data Link Connector (DLC). Just follow the steps below to turn on the scan tool:

1) Connect the scan tool and diagnostic connector with the extension cable supplied.
2) Find DLC on vehicle.

- ***A plastic DLC cover may be found for some vehicles and you need to remove it before plugging the OBD2 cable.***

3) Plug the diagnostic connector to vehicle's DLC.

3.6 Obtaining Login Password

CAUTION: The login password is used to get access to software updates and technical supports from manufacturer or distributors' websites. DO NOT read the password unless you decide to buy the scan tool.

1) Install four 1.5V batteries and press power key, or connect the tool to vehicle DLC to power up the scan tool.
2) From **Main Menu**, use **UP/DOWN** button to select **Login Password**, and press **OK** button.

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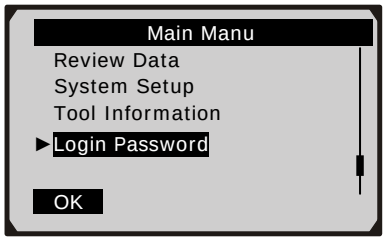
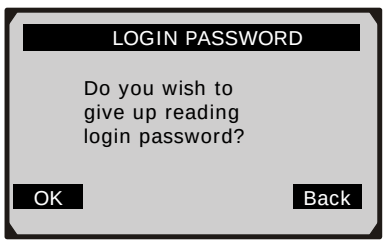


3) Press **OK** button to continue.

4) A message prompting you to give up reading the password comes up.



5) Press **Back** button to read password.

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- If you decide not to read the password, press **OK** button to return.

3.7 Product Setup

The scan tool allows you to make the following adjustments and settings:

1) **Language:** Selects the desired language.
2) **Contrast:** Adjusts the contrast of the LCD display.
3) **Unit of Measure:** Sets the unit of measure to English or Metric.
4) **Auto Power-off:** Sets automatic power-off time limits.
5) **Title Style:** Changes display mode between "with title" and "without title".
6) **Menu Style**：Changes selected menu style between "highlighted" and "normal".
7) **Scroll Style**： Changes scroll style between "scroll" and "normal".
8) **Button Style**：Changes button style between "highlighted" and "normal"
9) **Default:** Resets the scan tool to factory default settings.

- ***Settings of the unit will remain until change to the existing settings is made.***

To enter system setup mode

1) Use **UP/DOWN** button to select **System Setup** from **Main Menu** and press **OK** button. Follow the instructions to make adjustments and settings as described in the following setup options.

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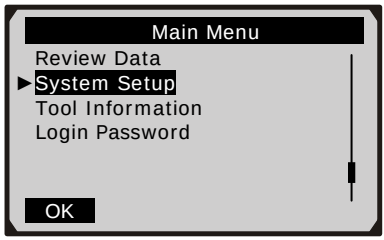
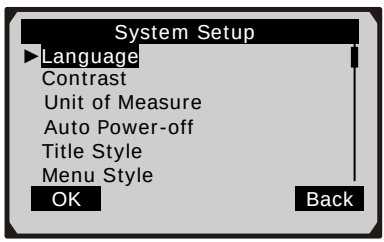


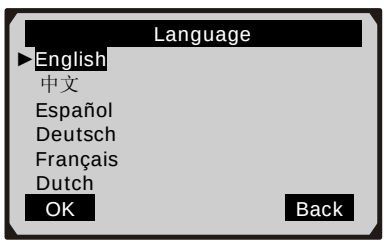
Language Setup

- ***English is the default language.***

2) From **System Setup** menu, use **UP/DOWN** button to select **Language**, and press **OK** button.



3) Use **UP/DOWN** button to select the desired language and press **OK** button to save your selection and return to previous menu.



Contrast Adjustment

1) From **System Setup** menu, use **UP/DOWN** scroll button to select **Contrast**, and press **OK** button.

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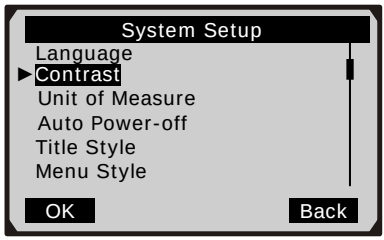
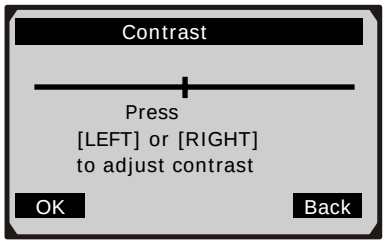


2) From **Contrast** menu, use **LEFT/RIGHT** scroll button to decrease or increase contrast.

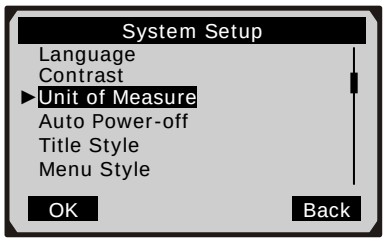


3) Press **OK** button to save your settings and return to previous menu.

Unit of Measure

- ***Metric is the default measurement unit.***

1) From **System Setup** menu, use **UP/DOWN** scroll button to select **Unit of Measure** and press **OK** button.



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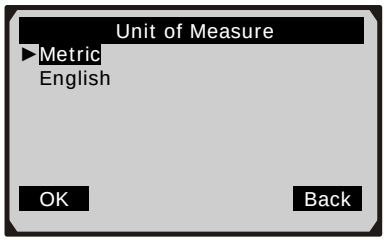
2) From **Unit of Measure** menu, use **UP/DOWN** scroll button to select the desired unit of measurement.

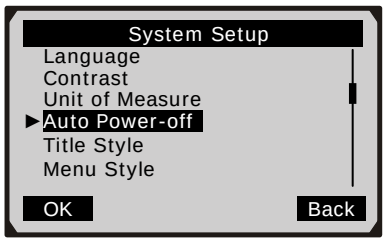


3) Press **OK** button to save your selection and return to previous menu.

Auto Power-off

- ***The minimum automatic power-off time is 1 minute, and the maximum is 30 minutes.***
- ***Auto power-off setup can be performed only when the scanner is powered by AAA batteries.***

1) From **System Setup** menu, use **UP/DOWN** scroll button to select **Auto Power-off** and press **OK** button.



2) From **Auto Power-off** menu, use **UP/DOWN** button to change automatic power-off limits.

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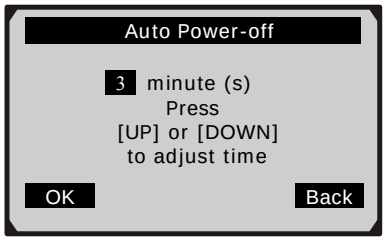
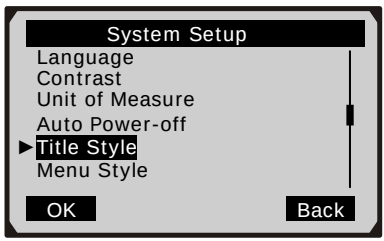


3) Press **OK** button to save your setting and return to previous menu.

Title Style

- ***The default title style is "With Title".***

1) From **System Setup** menu, use **UP/DOWN** button to select **Title Style** and press **OK** button.



2) From **Title Style** menu, use **UP/DOWN** button to select between **With Title** and **Without Title**.

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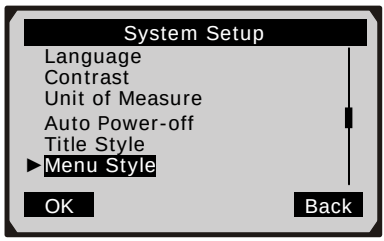
3) Press **OK** button to save your selection and return to previous menu.

Menu Style

- ***The default menu style is "Normal".***

1) From **System Setup** menu, use **UP/DOWN** button to select **Menu Style** and press **OK** button.



2) From **Menu Style** menu, use **UP/DOWN** button to select menu style between **Highlighted** and **Normal**.

3) Press **OK** button to save your selection and return to previous menu.

Scroll Style

- ***The default scroll style is "Scroll".***

1) From **System Setup** menu, use **UP/DOWN** button to select **Scroll Style** and press **OK** button.

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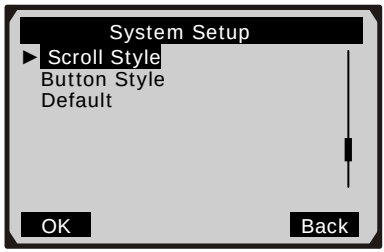
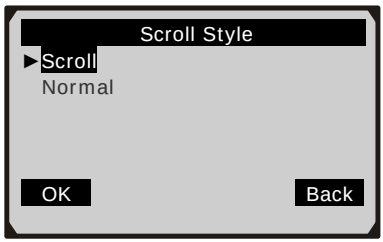


2) From **Scroll Style** menu, use **UP/DOWN** button to select scroll style between **Scroll** and **Normal**.

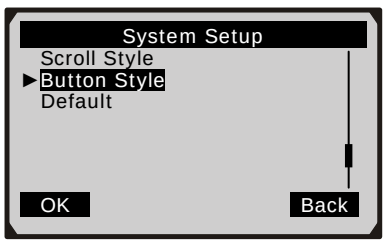


3) Press **OK** button to save your selection and return to previous menu.

Button Style

- ***The default button style is "Highlighted".***

1) From **System Setup** menu, use **UP/DOWN** button to select **Button Style** and press **OK** button.



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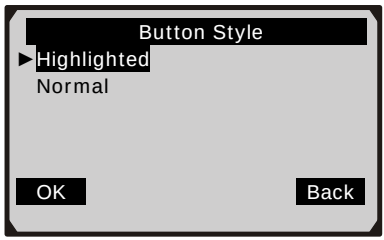
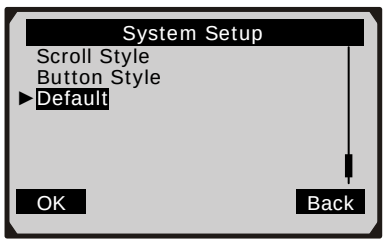
2) From **Button Style** menu, use **UP/DOWN** button to select button style between **Highlighted** and **Normal**.



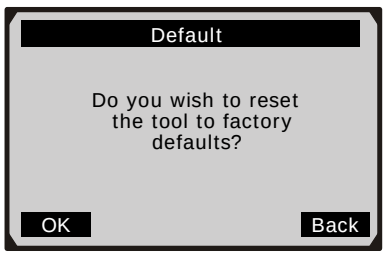
3) Press **OK** button to save your selection and return to previous menu.

Default

1) From **System Setup** menu, use **UP/DOWN** button to select **Default** and press **OK** button.



2) A message comes up asking for your confirmation.



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3) Press **OK** button to reset the scan tool to factory default settings, and a "Reset Done!" message shows on the screen.

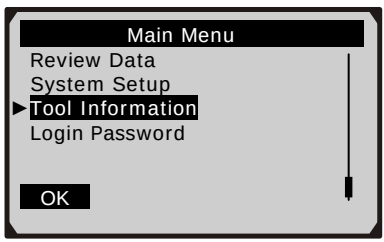
- If you do not wish to reset the tool, press **Back** button to return to previous screen.

4) Press any key to return to previous screen.

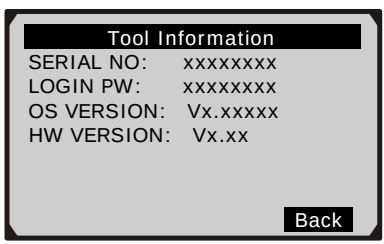
3.8 Tool Information

The Tool Information function allows viewing of some important information of the scan tool, such as serial number and login password.

1) From **Main Menu**, use **UP/DOWN** button to select **Tool Information** and press **OK** button.



2) View tool information on screen.



- If the login password has not been read yet, it is not displayed on the screen.

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3.9 Battery Replacement

The scan tool requires four AAA batteries to operate when disconnected from the vehicle. When the "▭" icon flashes, replace batteries as per instructed below:

1) Locate the battery cover on the back of the scan tool.
2) Remove the battery cover screw and slide the battery cover off.
3) Remove discharged batteries and install 4 new AAA batteries.
4) Reinstall battery cover by sliding battery cover on and installing screw.

3.10 Vehicle Coverage

The MaxiDiag series professional scan tool includes 4 professional scan tools: JP701, EU702, US703 and FR704.
They are not only able to work with global OBDII/EOBD compliant vehicles but also able to diagnose non-OBDII compliant vehicles. They are specially designed to read and clear trouble codes, and to retrieve ECU information of engine, automatic transmission, ABS and airbag systems for Japanese, European, American and French vehicles. For most pre-OBDII vehicles, they do not have standard 16-pin OBDII DLC (Data Link Connector). You need to have proper diagnostic connectors to diagnose them.

3.11 Product Troubleshooting

Vehicle Linking Error

A communication error occurs if the scan tool fails to communicate with the vehicle's ECU (Electronic Control Unit). You need to do the following to check up:

- ✓ Verify that the ignition is ON.
- ✓ Check if the scan tool's diagnostic connector is securely connected to the vehicle's DLC.
- ✓ Turn the ignition off and wait for about 10 seconds. Turn the ignition back to on and continue the testing.
- ✓ Verify the control module is not defective.

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Operating Error

If the scan tool freezes, then an exception occurs or the vehicle's ECU (Electronic Control Unit) is too slow to respond to requests. You need to do the following to reset the tool:

- ✓ Press and hold **POWER** button for at least 2 seconds to reset the scan tool.
- ✓ Turn the ignition off and wait for about 10 seconds. Turn the ignition back to on and continue the testing.

Scan Tool doesn't power up

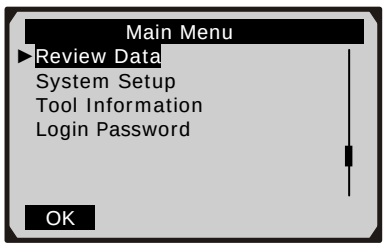
If the scan tool won't power up or operates incorrectly in any other way, you need to do the following to check up:

- ✓ Check if the scan tool's diagnostic connector is securely connected to the vehicle's DLC.
- ✓ Check if the DLC pins are bent or broken. Clean the DLC pins if necessary.
- ✓ Check vehicle battery to make sure it is still good with at least 8.0 volts.

4. Review Data

The Review Data function allows viewing of previously recorded diagnostic data. Only review of live data needs detailed instructions.

1) Use **UP/DOWN** button to select **Review Data** from **Main Menu**, and press **OK** button.



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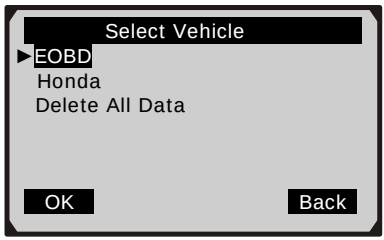
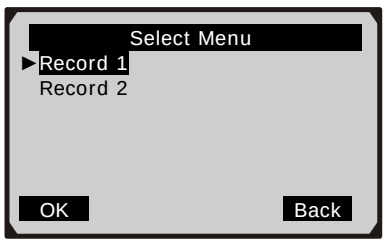
2) Use **UP/DOWN** button to select the desired vehicle from **Review Data** menu, and press **OK** button.



- If no data stored in the scan tool, a "No data available" message shows on the screen.

3) Use **UP/DOWN** button to select diagnostic path, and press **OK** button.



- "Record x" indicates how many tests you have performed; and "Test x" indicates how many times you have recorded data from the same test.

4) View recorded data on screen.

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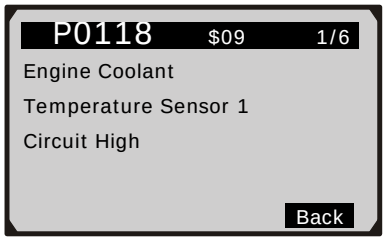
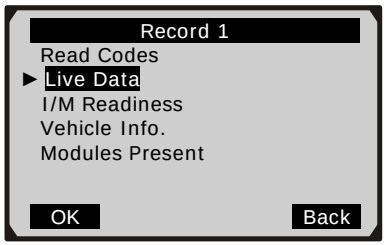
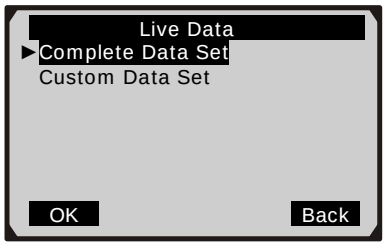


Reviewing Live Data

1) To review live data, use **UP/DOWN** scroll button to select diagnostic path till **Live Data** is located, and press **OK** button.



2) Use **UP/DOWN** scroll button to select **Complete Data Set** or **Custom Data Set,** when necessary, and press **OK** button.



3) Use **UP/DOWN** scroll button to select a test, and press **OK** button.

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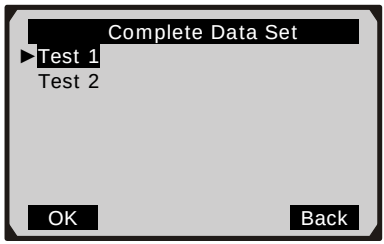
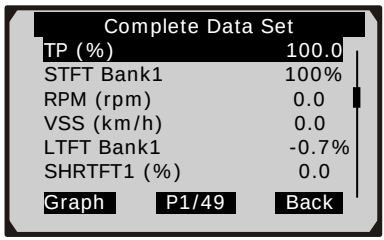


4) View recorded live data on screen.

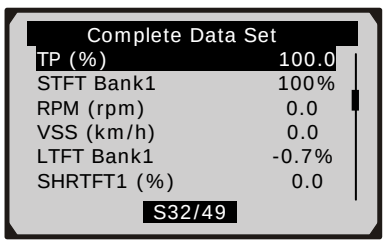


- The number "x/x" indicates total number of recorded frames and the sequence of currently reviewed frame.

5) Use **UP/DOWN** button to view PID's of each frame.

6) Use **LEFT/RIGHT** button to view previous or next frames of data.

7) Press **Px/x** button to play live data automatically.



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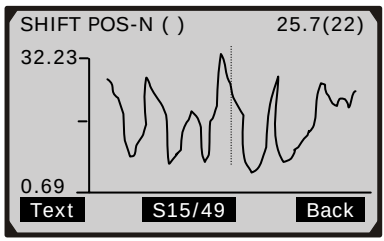
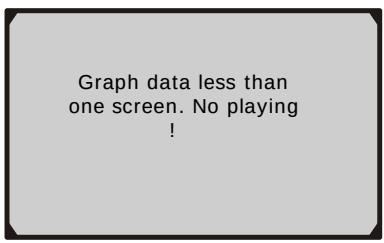
- When playing live data, you are not allowed to execute any other commands, but to stop playing by pressing **Sx/x** button, and to view help information by pressing **?** button

8) Press **Sx/x** button to stop playing.

9) To play PID graphs, press **Graph** button and then use **Px/x** button



- Y axis of the coordinates indicates the maximum and minimum values of a PID, and abscissa axis indicates time. Currently played PID and its value are displayed on the upper part of the screen.
- The vertical line in the graph indicates the position of the frame in the graph.
- If recorded graph data covers less than one screen, following screen appears:



10) Stop playing PID graphs, and press **Back** button to return to previous screen.

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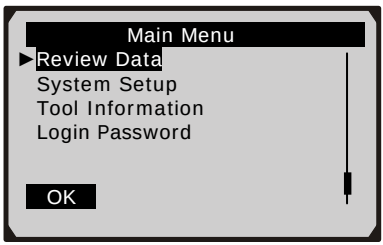
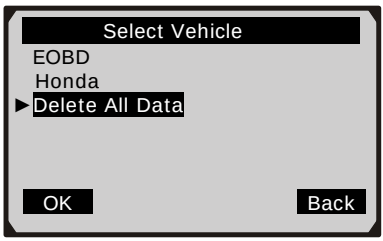
Deleting All Data

CAUTION: The Delete All Data function allows erasing all recorded data on the scan tool. Review the recordings thoroughly before erasing.

5) Use **UP/DOWN** button to select **Review Data** from **Main Menu**, and press **OK** button



6) Use **UP/DOWN** button to select **Delete All Data** from **Select Vehicle** menu, and press **OK** button.



7) A message comes up to ask for your confirmation.

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8) Press **OK** button to erase recorded data, and a "Delete done!" message shows on the screen.

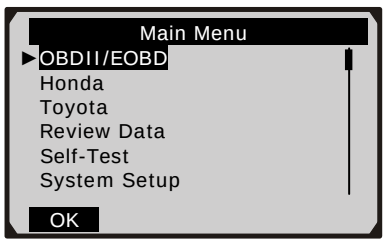
- If you decide not to delete the data, press **Back** button to return to previous screen.

5. Diagnostics

5.1 OBDII/EOBD Diagnostics

When more than one vehicle control module is detected by the scan tool, you will be prompted to select the module where the data may be retrieved. The most often selected modules are Powertrain Control Module [PCM] and Transmission Control Module [TCM].

1) Turn the ignition off.
2) Locate the vehicle's 16-pin Data Link Connector (DLC).
3) Plug the OBDII connector to the vehicle's DLC.
4) Turn the ignition on. Engine can be off or running.
5) Use **UP/DOWN** button to select **OBDII/EOBD** from **Main Menu**.



6) Press **OK** button to confirm. A sequence of messages displaying protocols will be observed on the display until the vehicle protocol is detected.

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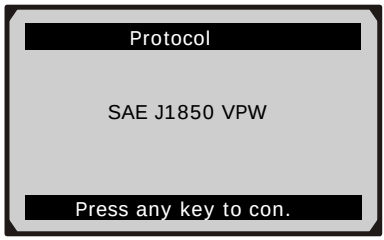


- ***If the scan tool fails to communicate with the vehicle's ECU (Engine Control Unit), a "LINKING ERROR!" message shows up on the display.***

✓ Verify that the ignition is ON.

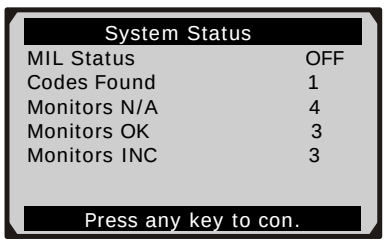
✓ Check if the scan tool's OBD II connector is securely connected to the vehicle's DLC.

✓ Verify that the vehicle is OBD2 compliant.

✓ Turn the ignition off and wait for about 10 seconds. Turn the ignition back to on and repeat the procedure from step 5.

- ***If the "LINKING ERROR" message does not go away, then there might be problems for the scan tool to communicate with the vehicle. Contact your local distributor or the manufacturer's customer service department for assistance.***

7) View a summary of system status (MIL status, DTC counts, monitor status) on screen.



- If more than one module is detected, you are prompted to select a module before testing.

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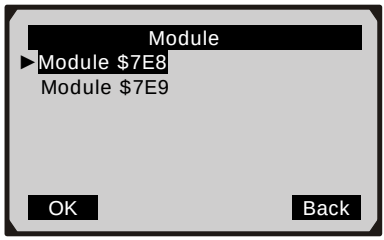


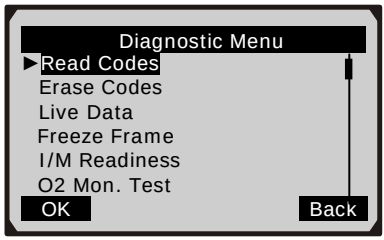
- Use **UP/DOWN** button to select a module and press **OK** button.

Reading Codes

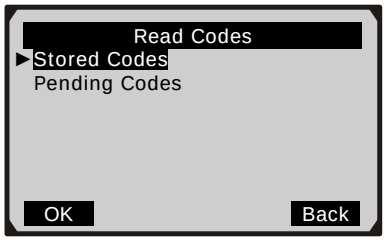
CAUTION: Don't connect or disconnect any test equipment with ignition on or engine running.

- Reading Codes can be done with the key on engine off (KOEO) or with the key on engine running (KOER).
- Stored Codes are also known as "hard codes" or "permanent codes". These codes cause the control module to illuminate the malfunction indicator lamp (MIL) when emission-related fault occurs.
- Pending Codes are also referred to as "maturing codes" or "continuous monitor codes". They indicate problems that the control module has detected during the current or last driving cycle but are not considered serious yet. Pending Codes will not turn on the malfunction indicator lamp (MIL). If the fault does not occur within a certain number of warm-up cycles, the code clears from memory.

8) Use **UP/DOWN** button to select **Read Codes** from **Diagnostic Menu** and press **OK** button.

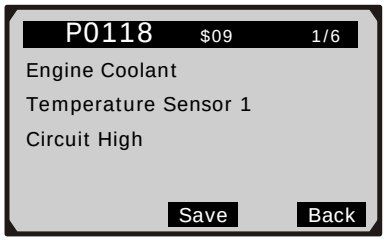


9) Use **UP/DOWN** button to select **Stored Codes** or **Pending Codes** from **Read Codes** menu and press **OK** button.



- If there are no Diagnostic Trouble Codes present, the display indicates "**No codes are stored in the module!**" Press any key to return to **Read Code** menu.

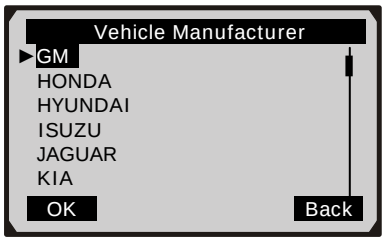
10) View DTC's and their definitions on screen.



- The control module ID, sequence of the DTC's, and total number of codes detected will be observed on the upper right hand corner of the display.

11) If more than one DTC is found, use **LEFT/RIGHT** button, as necessary, until all the codes have been shown up.

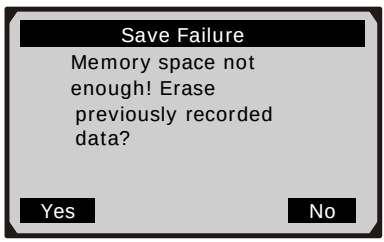
- If retrieved DTC's contain any manufacturer specific or enhanced codes, use **UP/DOWN** scroll button to select manufacturer and then press **OK** button to confirm.



- If the manufacturer for your vehicle is not listed, use **UP/DOWN** button to select **Other** and press **OK** button.

12) Press **Save** button to record retrieved DTC's, and a "Save done!" message shows on the screen.

- When there is not enough memory space, a warning message prompting to delete previously stored data shows on the screen.



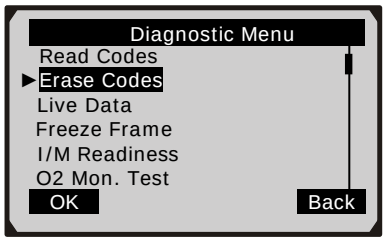
- If you wish to delete all previously stored data, press **OK** button to save currently retrieved data in the scanner.
- If you do not wish to delete the data, press **Back** button to return to previous menu.

Erasing Codes

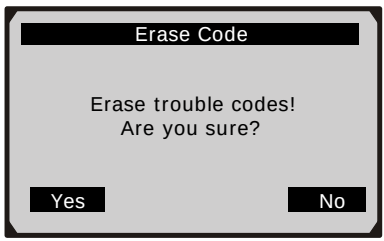
CAUTION: Erasing the Diagnostic Trouble Codes may allow the scan tool to delete not only the codes from the vehicle's on-board computer, but also "Freeze Frame" data and manufacturer specific enhanced data. Further, the I/M Readiness Monitor Status for all vehicle monitors is reset to Not Ready or Not Complete status. Do not erase the codes before the system has been checked completely by a technician.

- ***This function is performed with key on engine off (KOEO). Do not start the engine.***

1) If you decide to erase the DTCs, use **UP/DOWN** button to select **Erase Codes** from **Diagnostics Menu** and press **OK** button.

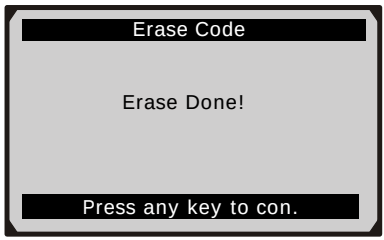


2) A warning message comes up to ask for your confirmation.

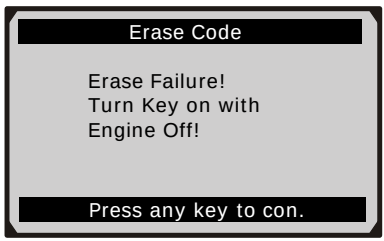


3) Press **Yes** button to erase codes.
   - If you do not want to proceed with erasing the codes, press **No** button to exit.

4) An "**Erase Done!**" confirmation message shows on the display. Press any button to return to **Diagnostic Menu**.



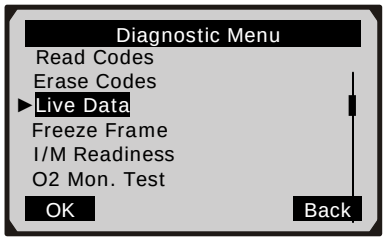
- If the codes are not cleared, then a message "**Erase Failure! Turn Key on with Engine off!"** will appear.



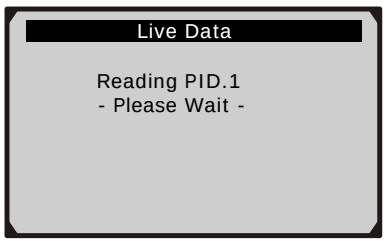
Live Data

The Live Data function allows viewing and recording of live or real time PID data of the vehicle's computer modules. It is available only for OBDII/EOBD compliant vehicles.

1) To view live data, use **UP/DOWN** button to select **Live Data** from **Diagnostic Menu** and press **OK** button.

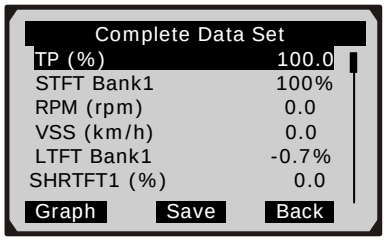


2) Wait a few seconds while the scan tool validates PID MAP.

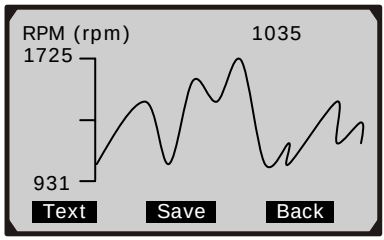


3) To view entire data set, use **UP/DOWN** button to select **Complete Data Set** from **Live Data** menu and press **OK** button.

4) View live PID data on the screen. Use **LEFT/RIGHT** scroll button, when necessary, to move to previous or next screen to view additional data.

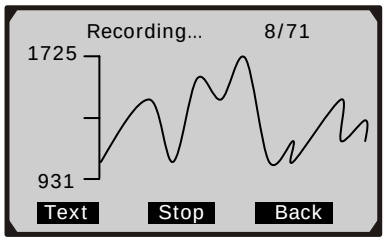


5) When graphic viewing available, press **Graph** to view graph of highlighted PID.

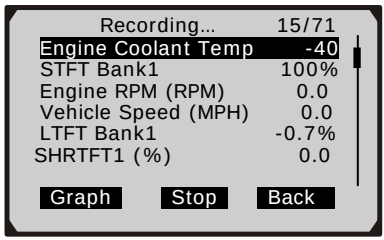


- PID name, current value, maximum and minimum values are displayed on the screen.

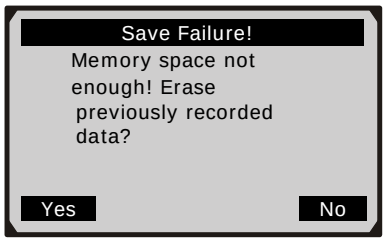
6) Press **Text** button to return to text viewing of PID data.
7) Press **Save** button to record retrieved live data and PID graphs.
   - If you record live data under graph mode, following screen shows:



- If you record live data under text mode, following screen shows:



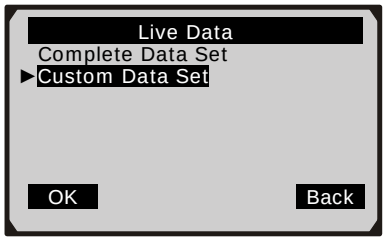
- The number "x/x" indicates the maximum frames of data that can be recorded and sequence of the frame being recorded. Depending on the remaining memory space of the scan tool, the maximum frames that can be recorded vary.
- When there is not enough memory space, a warning message prompting to delete previously recorded data shows on the screen.



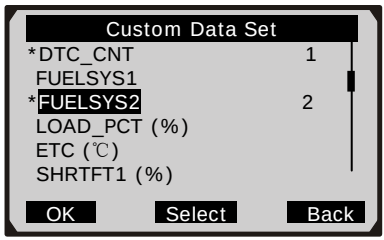
- If you wish to delete the data, press **Yes** button, and save currently retrieved data in the scanner.
- If you do not wish to delete the data, press **No** button to return to previous screen.

8) Press **Stop** button to stop recording, and a "Save done!" message appears on the screen.
   - If memory space gets full when recording, following screen appears:

9) To view customized data set, use **UP/DOWN** button to select **Custom Data Set** from **Live Data** menu and press **OK** button.



10) Use **UP/DOWN** button to move up and down list and press **Select** button to select/deselect parameters. Selected parameters are marked with asterisk (*) icons.



- The number "x" to the right of the screen indicates the order that the parameters are selected and will be displayed.

11) Press **OK** button to view marked PIDs. Use **LEFT/RIGHT** scroll button, when necessary, to move to previous or next screen to view additional data.

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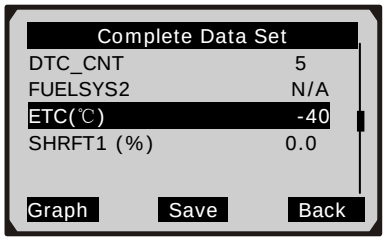
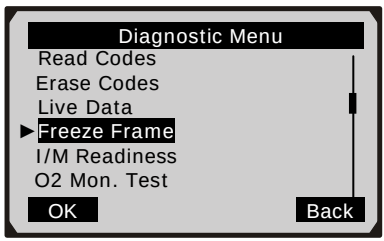


12) Repeat procedures from Step 5 to Step 8 on Page 37 to view PID graphs and save selected items.

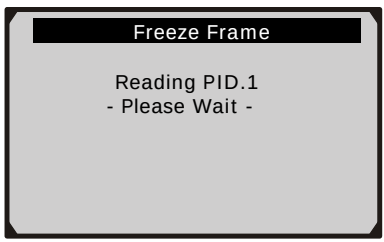
13) Press **Back** button to return to previous screen.

Viewing Freeze Frame Data

1) To view freeze frame data, use **UP/DOWN** button to select **View Freeze Frame** from **Diagnostic Menu** and press **OK** button.



2) Wait a few seconds while the scan tool validates PID MAP.



3) Use **LEFT/RIGHT** button, as necessary, to view additional data on previous or next screens.

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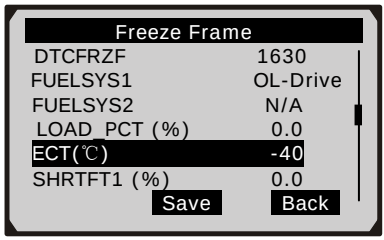

- If there is no freeze frame data available, an advisory message "No freeze frame data stored!" shows on the display.

4) Press **Save** button to record freeze frame. A confirming message "Save done!" shows on the screen.

5) Press **Back** button to return to **Diagnostic Menu.**

Retrieving I/M Readiness Status

I/M Readiness function is used to check the operations of the Emission System on OBD2 compliant vehicles. It is an excellent function to use prior to having a vehicle inspected for compliance to a state emissions program.
Some latest vehicle models may support two types of I/M Readiness tests:

A. ***Since DTCs Cleared*** - indicates status of the monitors since the DTCs are erased.

B. ***This Drive Cycle*** - indicates status of monitors since the beginning of the current drive cycle.

An I/M Readiness Status result of "NO" does not necessarily indicate that the vehicle being tested will fail the state I/M inspection. For some states, one or more such monitors may be allowed to be "Not Ready" to pass the emissions inspection.

- **"OK"** -- Indicates that a particular monitor being checked has completed its diagnostic testing.
- **"INC"** -- Indicates that a particular monitor being checked has not completed its diagnostic testing.
- **"N/A"** -- The monitor is not supported on that vehicle.

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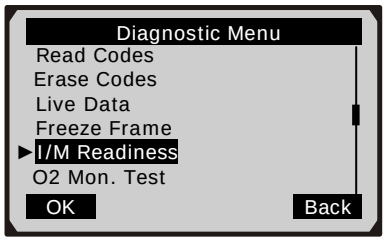
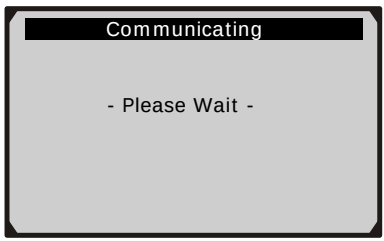
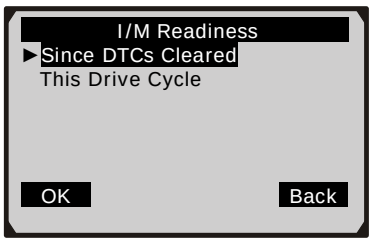
1) Use **UP/DOWN** button to select **I/M Readiness** from **Diagnostic Menu** and press **OK** button.



2) Wait a few seconds while the scan tool communicates with vehicle control unit.



- If the vehicle supports both types of tests, then both types will be shown on the screen for selection.



3) Use **LEFT/RIGHT** button, as necessary, to view the status of the MIL light (**"ON" or "OFF**) and the following monitors:

- **Misfire monitor** -- Misfire monitor

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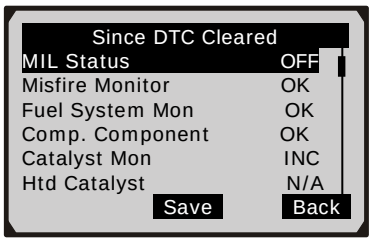
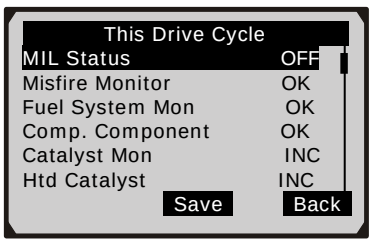
- **Fuel System Mon --** Fuel System Monitor
- **Comp. Component** -- Comprehensive Components Monitor
- **EGR** -- EGR System Monitor
- **Oxygen Sens Mon** -- O2 Sensors Monitor
- **Catalyst Mon** -- Catalyst Monitor
- **EVAP System Mon** -- Evaporative System Monitor
- **Oxygen Sens htr** --O2 Sensor Heater Monitor
- **Sec Air System** -- Secondary Air Monitor
- **Htd Catalyst --** Heated Catalyst Monitor
- **A/C Refrig Mon** -- A/C system Monitor



- If the vehicle supports readiness test of "**This Drive Cycle**", following screen displays:



4) Press **Save** button to record the results.
5) Press **Back** button to return to **Diagnostic Menu.**
6)

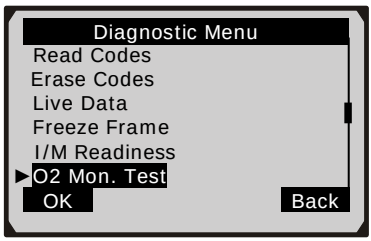
O2 Monitor Test

OBD2 regulations set by SAE require that relevant vehicles monitor and test the oxygen (O2) sensors to identify problems related to fuel efficiency and vehicle emissions. These tests are not on-demand tests and they are done automatically when engine operating conditions are within specified limits. These test results are saved in the on-board computer's memory.

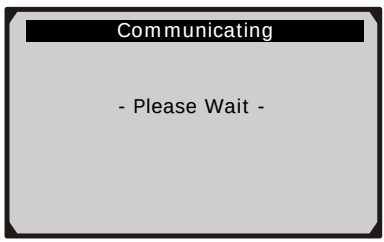
The O2 Monitor Test function allows retrieval and viewing of O2 sensor monitor test results for the most recently performed tests from the vehicle's on-board computer.

The O2 Monitor Test function is not supported by vehicles which communicate using a controller area network (CAN). For O2 Monitor Test results of CAN-equipped vehicles, see chapter "On-Board Mon. Test".

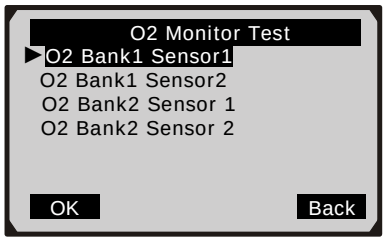
1) Use **UP/DOWN** button to select **O2 Mon. Test** from **Diagnostic Menu** and press **OK** button.



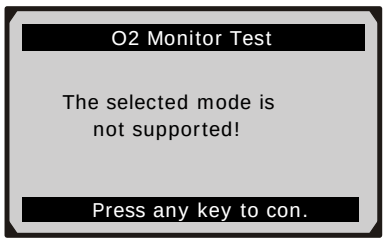
2) Wait a few seconds while the scan tool communicates with vehicle control unit.



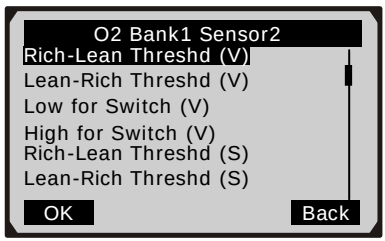
3) Use **UP/DOWN** button to select O2 sensor from **O2 Monitor Test** menu and press **OK** button.



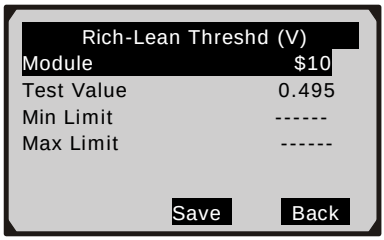
- If the vehicle does not support O2 Monitor Test, following screen shows:



4) Use **UP/DOWN** button to select an item to view detailed information.



5) View test results of selected item on screen.



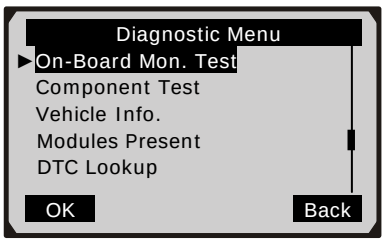
6) Press **Save** button to record the data.

7) Press **Back** button to return to previous menus.

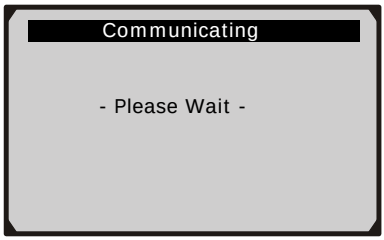
On-Board Monitor Test

The On-Board Monitor Test is useful after servicing or after erasing a vehicle's control module memory. The On-Board Monitor Test for non-CAN-equipped vehicles retrieves and displays test results for emission-related powertrain components and systems that are not continuously monitored. The On-Board Monitor Test for CAN-equipped vehicles retrieves and displays test results for emission-related powertrain components and systems that are and are not continuously monitored. Test and components IDs are determined by the vehicle manufacturer.

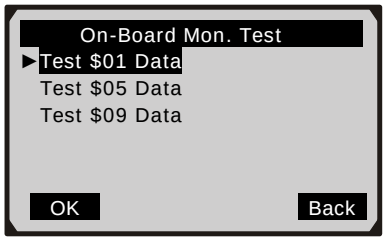
1) Use **UP/DOWN** button to select **On-Board Mon. Test** from **Diagnostic Menu** and press **OK** button.



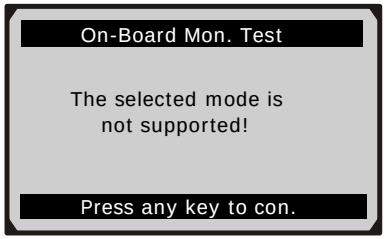
2) Wait a few seconds while the scan tool communicates with vehicle control module.



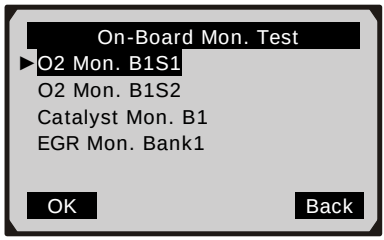
3) From **On-Board Mon. Test** menu, use **UP/DOWN** button to select an item to view and press **OK** button.



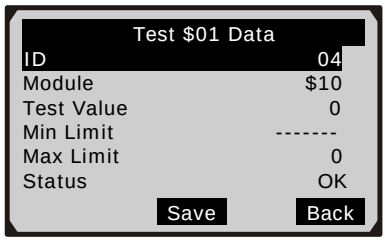
- If the vehicle does not support On-Board Monitor Test, following screen shows:



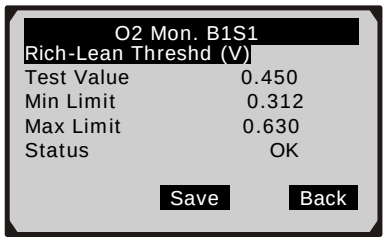
- For CAN-equipped vehicles, the test selections can be as below:



4) Use **UP/DOWN** button to select the desired monitor from **On-Board Mon. Test** menu and press **OK** button.
5) View the test data on screen.



- For CAN-equipped vehicles, the test results displayed can be as below:

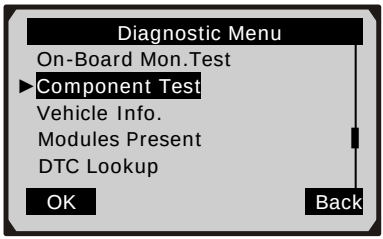


6) Press **Save** button to record the data.
7) Press **Back** button to return to the previous menus.

Component Test

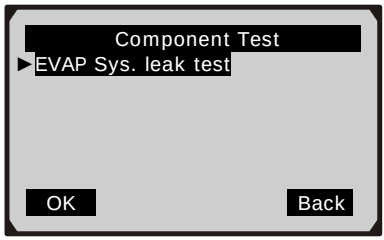
The Component Test function allows initiating a leak test for the vehicle's EVAP system. The scan tool itself does not perform the leak test, but commands the vehicle's on-board computer to start the test. Different vehicle manufacturers might have different criteria and methods for stopping the test once it has been started. Before starting the component test, refer to the vehicle service manual for instructions to stop the test.

1) Use **UP/DOWN** button to select **Component Test** from **Diagnostic Menu** and press **OK** button.



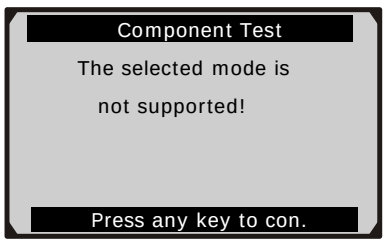
2) Wait a few seconds while the scan tool communicates with vehicle control unit.

3) From **Component Test** Menu, use **UP/DOWN** button to select a test to be activated.



4) If the test has been initiated by the vehicle, a confirmation message displays on the screen.

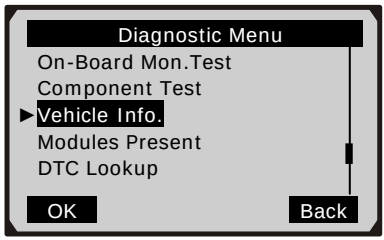
- Some vehicles do not allow scan tools to control vehicle systems or components. If the vehicle under test does not support the EVAP Leak Test, an advisory message is displayed on the screen.



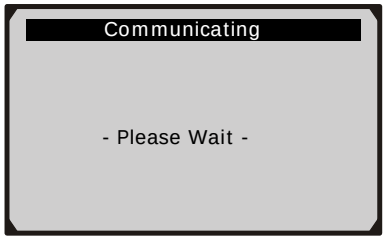
Viewing Vehicle Information

The Vehicle Info. function enables retrieval of Vehicle Identification No.(VIN), Calibration ID Nos. (CINs), Calibration Verification Nos. (CVNs) and In-use Performance Tracking on 2002 and newer vehicles that support Mode 9.

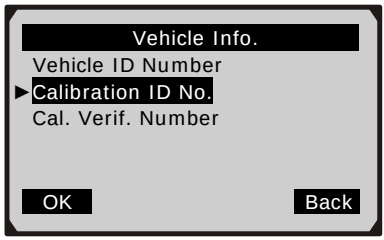
1) Use **UP/DOWN** button to select **Vehicle Info.** from **Diagnostic Menu** and press **OK** button.



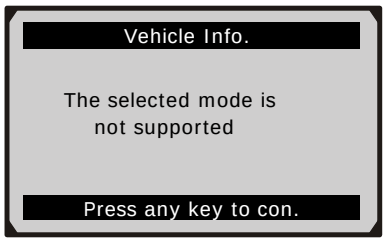
2) Wait a few seconds while the scan tool communicates with vehicle control unit.



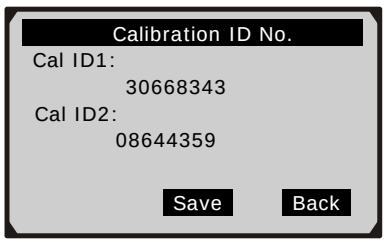
3) From **Vehicle Info.** menu, use **UP/DOWN** button to select available items to view and press **ENTER** button.



- If the vehicle does not support this mode, a message shows on the display warning that the mode is not supported.



4) View retrieved vehicle information on screen.

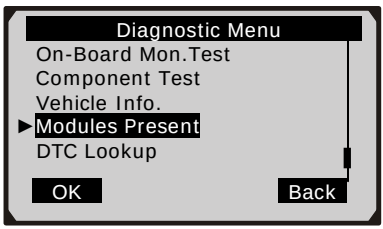


5) Press **Save** button to record the data.
6) Press **Back** button to return to previous screen.

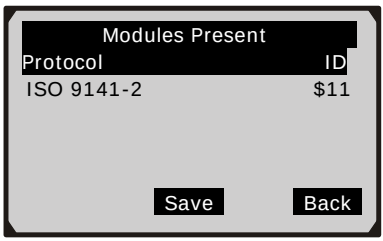
Modules Present

The Modules Present function allows viewing of module IDs and communication protocols for OBD2 modules in the vehicle.

1) Use **UP/DOWN** button to select **Modules Present** from **Diagnostic Menu** and press **OK** button.



2) View the modules present with their IDs and communication protocols.

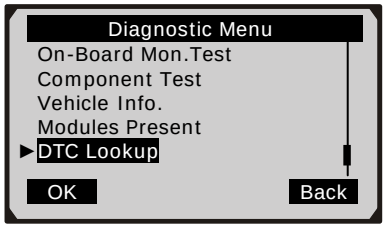


3) Press **Save** button to record the data.
4) Press **Back** button to return to previous screen.

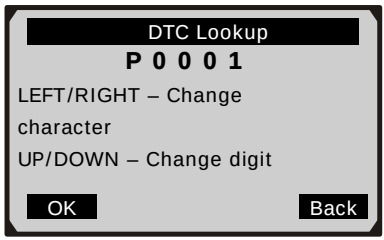
DTC Lookup

The DTC Lookup function is used to search for definitions of DTC's stored in built-in DTC library.

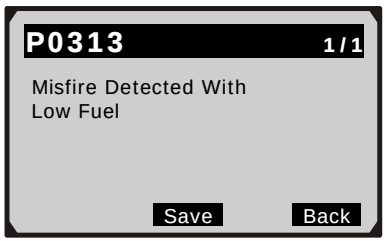
1) Use **UP/DOWN** button to select **DTC Lookup** from **Diagnostic Menu** and press **OK** button.



2) From **DTC Lookup** menu, use **LEFT/RIGHT** button to move to the desired character, use **UP/DOWN** button to change selected character and press **OK** button to confirm.



3) View the DTC definition on screen



4) Press **Save** button to record code definition.
5) To view next or previous DTC in built-in DTC library, use **LEFT/RIGHT** button.

- For manufacturer specific codes, you need to select a vehicle make on an additional screen to look for DTC definitions.

- If definition could not be found (SAE or Manufacturer Specific), the scan tool displays "Please refer to vehicle service manual!"

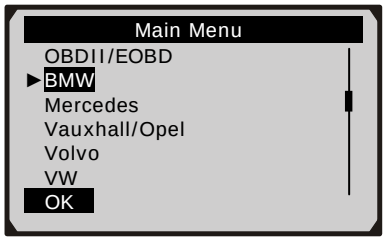
6) To enter another DTC, press **Back** button to return to previous screen.
7) To exit to **Diagnostic Menu,** press **Back** button.

5.2 Pre-OBDII Vehicle Diagnostics

The Pre-OBDII Vehicle Diagnostics function allows reading and clearing trouble codes, and retrieving ECU information of engine, automatic transmission, ABS and airbag systems for BMW, Chrysler, Citroen, Ford, Honda, GM, Mazda, Mercedes, Mitsubishi, Renault, Peugeot, Toyota, Vauxhall/Opel, VW/AUDI and etc. For some vehicles, it is able to retrieve VIN number and readiness status.

IMPORTANT: All software screens shown in this manual are examples, actual test screens vary for each vehicle being tested. Operation steps for different vehicles are basically the same, observe the menu titles and onscreen instructions to make correct option selections.

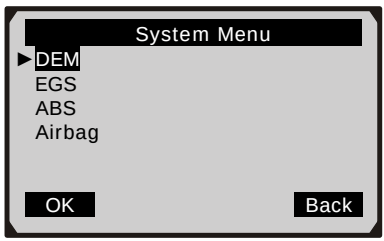
1) Turn the ignition off.
2) Locate the vehicle's Data Link Connector (DLC).
3) Connect the scan tool to the vehicle's DLC with correct diagnostic connector.
4) Turn the ignition on. Engine can be off or running.
5) Use **UP/DOWN** button to select vehicle manufacturer from **Main Menu**.



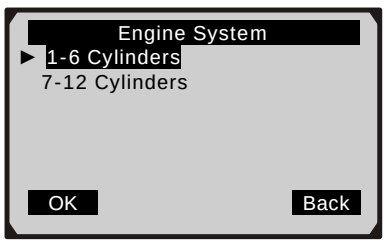
6) Observe the menu title on each screen to select the right option till the vehicle being tested is completely identified.

NOTE: For some vehicles, such as GM and Mercedes, a series of screens appear for you to identify the vehicle, but for some vehicle, such as BMW and VW, it is not necessary for you to do a lot of menu selections to identify the vehicle.

7) When the vehicle is identified, use **UP/DOWN** button to select the system you wish to test, and press **OK** button.



- For engine system of BMW vehicles, there might be more than one module detected. You need to select a module before testing.



- Use **UP/DOWN** button to select a module and press **OK** button.

NOTE: Systems that can be tested may be different for each vehicle.

8) Wait a few seconds while the scan tool initializes diagnostic system.

- ***If the scan tool fails to communicate with the vehicle's ECU (Electronic Control Unit), a "TESTER NOT COMMUNICATING WITH CONTROL UNIT" message comes up on the screen.***

✓ Verify that the ignition is ON.

✓ Check if the scan tool is securely connected to the vehicle's DLC.

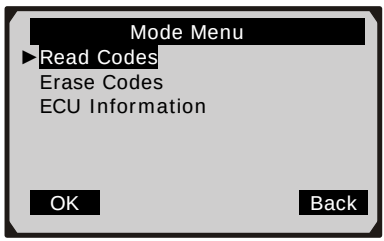
✓ Turn the ignition off and wait for about 10 seconds. Turn the ignition back to on and repeat the procedure from Step 5 to Step8 on Page 56.

- ***If the message remains, then there might be a problem with the scan tool communicating with the vehicle. Contact your local distributor or the manufacturer's customer service department for assistance.***

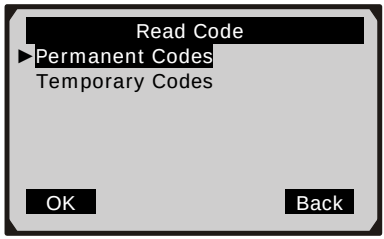
Reading Codes

CAUTION: Don't connect or disconnect any test equipment with ignition on or engine running.

1) Use **UP/DOWN** button to select **Read Codes** from **Mode Menu**, and press **OK** button.

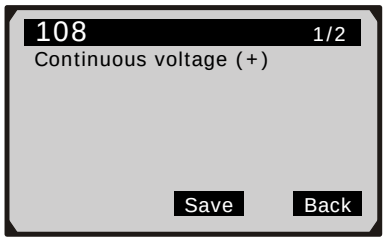


- For some vehicles, such as Honda and Toyota, you need to select code type form **Read Codes** menu to view code definitions.



NOTE: Different vehicle manufacturer may use different names for the same code type.

2) View code definition on screen.



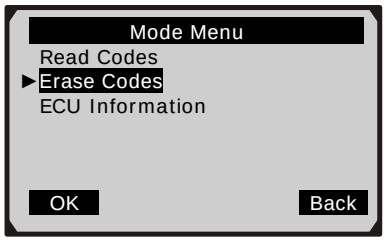
- Total number of retrieved codes and sequence of currently displayed trouble code can be observed on the upper part of the screen. Code status may also show on the screen for some vehicles, such as Opel and Renault.
- If no codes are detected, a "System pass. No fault codes detected." message shows on the screen.

3) Press **Save** button to record retrieved trouble codes and their definitions and a "Save done!" message shows on the screen.

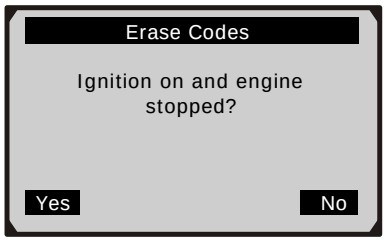
Erasing Code

CAUTION: Erasing the Diagnostic Trouble Codes may allow the scan tool to delete not only the codes from the vehicle's on-board computer, but also "Freeze Frame" data and manufacturer specific enhanced data. Do not erase the codes before the system has been checked completely by a technician.

1) Use **UP/DOWN** button to select **Erase Codes** from **Mode Menu** and press **OK** button.

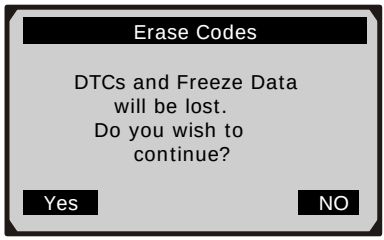


2) A message prompting you to turn key on with engine off comes up on the screen.



- If the key is not in KOEO position, press **No** button to return to **Mode Menu**.

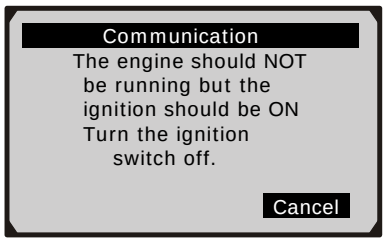
3) Press **Yes** button to continue, and a warning message comes up asking for your confirmation.



- If you decide not to erase codes, press **NO** button to exit. A "**Command Cancelled**." message shows on the screen.
- For some French vehicles such as Citroen and Renault, if the codes have not been read before erasing, a "**Please read faults before erasing!"** message comes up prompting you to read codes before erasing.

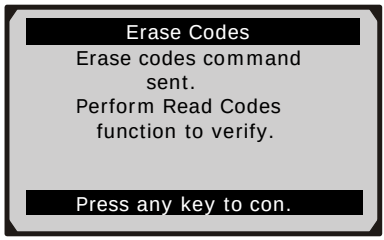
4) Press **Yes** button to send a command to erase codes.

- For some vehicles, such as Honda, a message prompting you to turn the key to KOEO position shows on the screen.



- Turn off the ignition and turn it back on 10 seconds later as instructed to erase codes; or press **Cancel** button to return to **Mode Menu**, if you decide not to erase the codes.

5) When the codes are cleared, following screen shows:



- For Citroen and Renault vehicles, switch off the ignition, turn it back on 10 seconds later as instructed and then press **Yes** button to verify if codes are cleared; or press **No** button to return to **Mode Menu**.
- If the scan tool fails to erase codes, following screen shows:

Communication
TESTER NOT COMMUNICATING WITH CONTROL UNIT
1. Make sure the ignition is switched ON
2. Check if the tester
Back

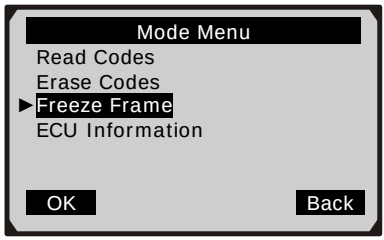
- Use **UP/DOWN** button to view additional troubleshooting tips, and press **Back** button to return to **Mode Menu**.

6) Press any key to continue.

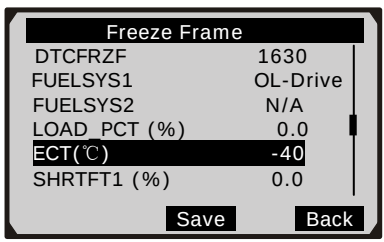
Viewing Freeze Frame

The Freeze Frame function allows viewing freeze frame of engine, A/T, ABS and airbag systems. The function may not be available for some vehicles.

1) Use **UP/DOWN** button to select **Freeze Frame** from **Mode Menu** and press **OK** button.



2) Wait a few seconds while the scan tool is communicating with control unit.
3) View freeze frame data on the screen.

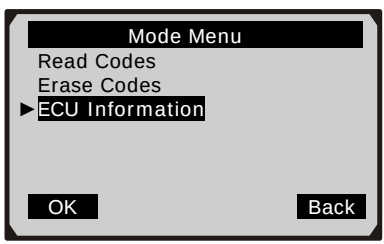


4) Press **Save** button to record the data.

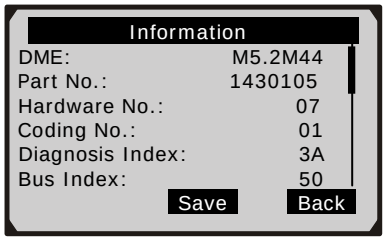
Retrieving ECU Info.

The ECU Info. function allows viewing of ECU part No. and etc. The function may not be available for some vehicles.

1) Use **UP/DOWN** button to select **ECU Information** from **Mode Menu** and press **OK** button.



2) Wait a few seconds while the scan tool is communicating with vehicle control module.
3) View control module information on the screen.



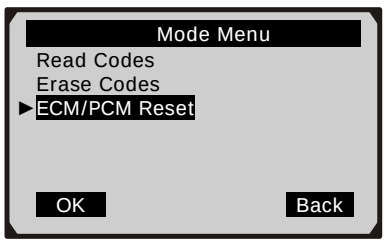
4) Press **Save** button to record the data.

Resetting ECM/PCM

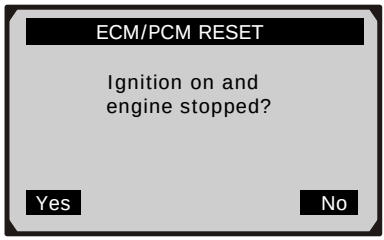
The ECM/PCM Reset function is used to reset Engine Control Module and Powertrain Control Module. The function is available for Honda ONLY.

CAUTION: Resetting ECM/PCM may allow the scan tool to delete both the codes, and "Freeze Frame" data and manufacturer specific enhanced data from the vehicle's on-board computer. Do not reset the control module before the system has been checked completely by a technician.

1) Use **UP/DOWN** button to select **ECM/PCM Reset** from **Mode Menu** and press **OK** button.

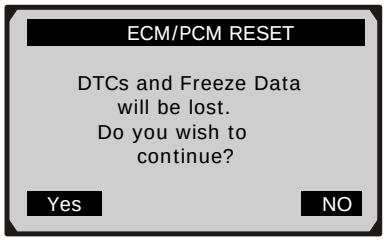


2) A message prompting you to turn key on with engine off comes up on the screen.



- If the key is not in KOEO position, press **No** button to return to **Mode Menu**.

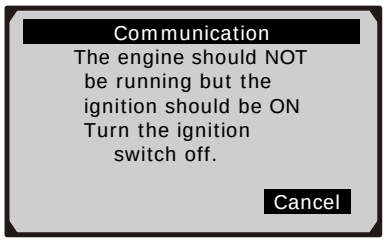
3) Press **Yes** button to continue, and a warning message comes up asking for your confirmation.



4) Press **Yes** button to send a command to reset ECM/PCM.

- If you decide not to reset ECM/PCM, press **NO** button to exit. A "Command Cancelled." message shows on the screen.

5) A message prompting you to turn the key to KOEO position shows on the screen.



6) Turn off the ignition and turn it back on 10 seconds later as instructed; or press **Cancel** button to return to **Mode Menu**, if you decide not to erase the codes.

7) When the codes are cleared, following screen shows:

- If the scan tool fails to reset the module, following screen shows:

Communication
TESTER NOT COMMUNICATING WITH CONTROL UNIT
1. Make sure the ignition is switched ON.
2. Check if the tester
Back

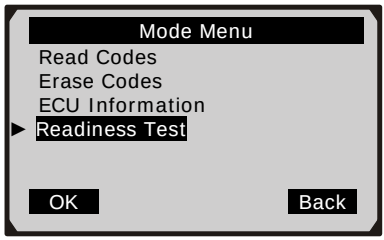
- Use **UP/DOWN** button to view additional troubleshooting tips, and press **Back** button to return.

8) Press any key to return to **Mode Menu**.

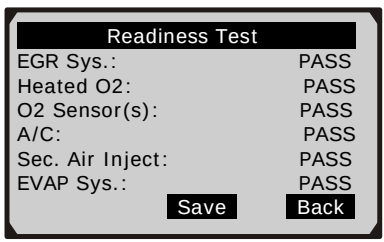
Readiness Test

The Readiness Test function is available for engine system of VW/AUDI vehicles ONLY.

1) Use **UP/DOWN** button to select **Readiness Test** from **Mode Menu** and press **OK** button.



2) Wait a few seconds while the scan tool is communicating with vehicle control module.
3) View readiness status on the screen.

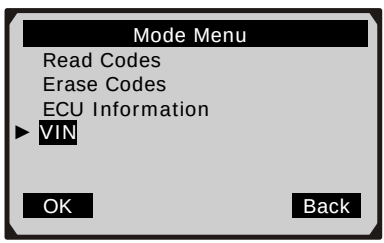


4) To record the data, press **Save** button.

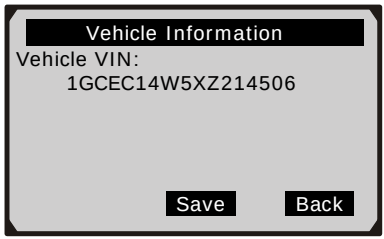
Retrieving VIN No.

This function is used to retrieve vehicle identification no. (VIN) of vehicles. It is available for GM vehicles ONLY.

1) Use **UP/DOWN** button to select **VIN** from **Mode Menu** and press **OK** button.



2) Wait a few seconds while the scan tool is communicating with vehicle control module.
3) View control module information on the screen.



4) To record the data, press **Save** button.

6. Updating and Printing

The scan tool allows user to update software and to print out recorded test data by connecting the device to a PC or laptop with the USB cable supplied.

NOTE: For detailed updating and printing instructions, refer to HELP information on the included CD.

To update software and print data, you need the following tools:

MaxiDiag scan tool
A computer with USB ports
A USB cable

1) Download update PC-Link and update files from our website www.auteltech.com
2) Place included CD into CD-ROM.
3) Follow onscreen instructions on your computer to install the PC-link.
4) Launch PC-Link when installations completed.
5) Connect the scan tool to computer with the USB cable supplied, and turn on the scan tool by pressing button.

7. Warranty and Service

7.1 Limited One Year Warranty

Autel warrants to its customers that this product will be free from all defects in materials and workmanship for a period of one (1) year from the date of the original purchase, subject to the following terms and conditions:

1) The sole responsibility of Autel under the Warranty is limsited to either the repair or, at the option of Autel, replacement of the code reader at no charge with Proof of Purchase. The sales receipt may be used for this purpose.
2) This warranty does not apply to damages caused by improper use, accident, flood, lightning, or if the product was altered or repaired by anyone other than the Manufacturer's Service Center.
3) Autel shall not be liable for any incidental or consequential damages arising from the use, misuse, or mounting of the code reader.
4) All information in this manual is based on the latest information available at the time of publication and no warranty can be made for its accuracy or completeness. Autel reserves the right to make changes at any time without notice.

7.2 Service Procedures

If you have any questions, please contact your local store, distributor or visit our website at www.auteltech.com

If it becomes necessary to return the scan tool for repair, contact your local distributor for more information.